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Psychophysiology Collection Overview

Maximise student engagement with a true-to-life lab experience



Lt is an online learning platform with ready-to-use content and interactive labs, ideal for psychophysiology courses.

Lt's Psychophysiology Collection explores cognitive neuroscience in a series of professionally designed lessons and labs, featuring biofeedback, classical conditioning, electrodermal response, perception, reaction time, and psychological bias.

Professionally developed lessons

Lt's latest Psychophysiology Collection comprises of 14 modules.

The collection allows educators to develop a high-quality, media-rich immersive lab experience that aligns with a flipped classroom. Lessons are ready to use as-is, or can be easily edited to suit your curriculum and your teaching preferences. Each media-rich lesson is designed to maximize engagement and suit diverse learning styles, with a strong focus on student outcomes.

Selected modules also include Pre-Lab Prep material. This lets students walk into the lab with an understanding of key principles, maximizing their engagement and freeing them up to focus on linking scientific theory with practice.



Improved efficiency



Increased student engagement



Improved results in theory and clinical practice



Increased student pass rates

Creating a custom education system is easy:



Education kits and transducers

+



High performance PowerLab data acquisition

+

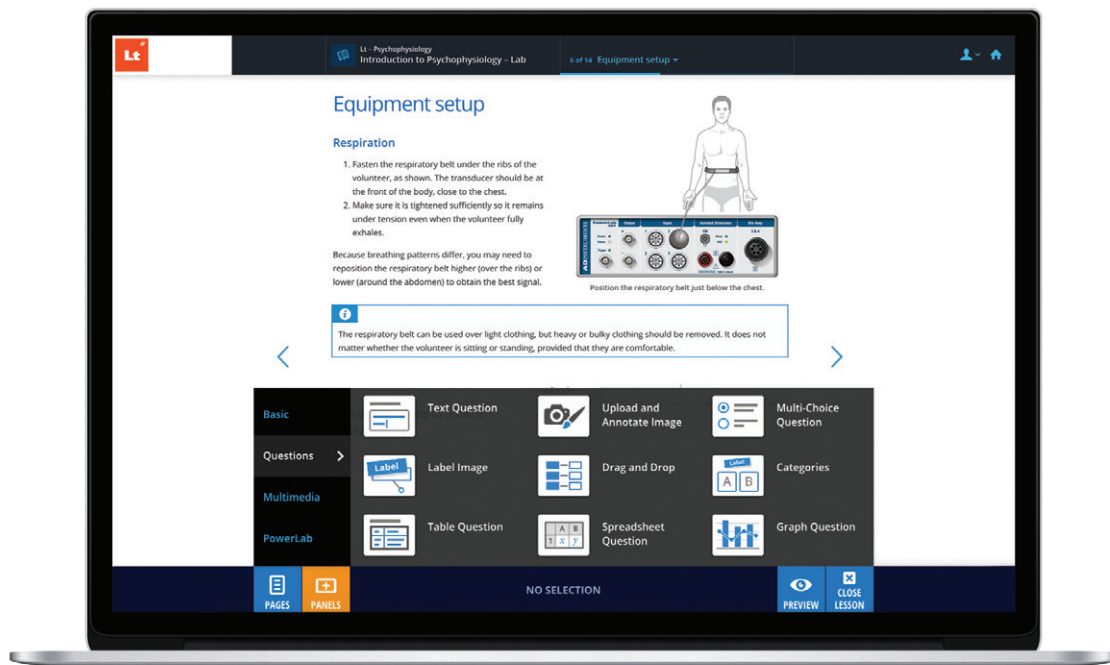


Active software and multimedia content

"With Lt we can give every student a fantastic experience. They really enjoy their practical labs now."

- Dr Michael Morris,
School of Medical Sciences,
University of Sydney, Australia





Psychophysiology Collection

14 MODULE COLLECTION

Modules may include: Tutorial • Pre-Lab Prep • Lab

Introduction to Psychophysiology

Record psychophysiological variables and learn the principles behind the galvanic skin response (GSR), respiratory rate, blood pressure and electromyography.

Biofeedback

Students will use biofeedback to try to alter physiological processes of which you are usually unaware. The three conditions students will try to control are: electrodermal response (skin conductance), skin temperature, and heart rate.

Diving Response

Investigate the effects of the diving response on heart rate and peripheral circulation in humans during simulated dives as well as breath holding.

EDR and Classical Conditioning

Complete a classical conditioning experiment, in which a neutral and adverse stimuli are paired to try to elicit a conditioned response. The three conditions students will manipulate are: electrodermal response, heart rate, and respiratory rate.

EEG

Record and analyse the changes to alpha and beta waves with eyes open and shut; and the effects of mental and auditory activity on alpha and beta waves, using electroencephalograms.

Electrodermal Response

Analyse the effects of emotion, stress, and lying (polygraph test) on skin conductance, skin temperature, heart rate and respiratory rate.

EOG

Record electro-oculograms (EOG's) in the horizontal plane. to examine different eye movements including: angular displacement, saccades, smooth tracking, gaze-holding and gaze-shifting, and nystagmus.

Reflexes and Reaction Times

Explore the similarities and differences of reflexes and reactions, using the PowerLab to examine their reaction times to stimuli under different conditions.

Sensory Illusions

Over a series of activities students investigate mechanisms of sensory perception and discover techniques that send conflicting information to the central nervous system.

Sensory Physiology

Learn how the body detects and perceives different sensations including touch, sight, taste, and movement. Suitable for students at all levels, and can be performed without a PowerLab.

Size-Weight Illusion

Explore the scientific principles of perception underlying size-weight illusion. The lab takes students through a series of experiments, building ability to describe and explain findings.

Stroop Test

Investigate the interference of conflicting messages and examine the effects of the Stroop Test as an experimental stressor.

Visual Evoked Potentials

Complete two activities in which a student watches a series of light flashes and then a checkerboard pattern reversal. Students will compare the two visual evoked potential waveforms to determine which stimulus elicits the greater response.

Muscle and EMG

Record EMG during voluntary muscle contractions and investigate how coactivation and contractile force changes with increasing demand. Measure the decline in your grip force during a sustained contraction and examine muscle fatigue. Discover how visual feedback, verbal feedback, and rest impact our ability to sustain muscle contractions.



PTK32 Education Psychophysiology Kit

Suitable for measuring Psychophysiological responses in humans. Capable of performing experiments including but not limited to EEG, blood pressure, electrodermal response, skin temperature (0°C to 50°C), ventilation rate, and directional specific light intensity.

Recommended:

Lt LabStation: Exercise Physiology
PowerLab 26T

Kit contains:

- GSR Amp
- Finger Electrodes
- Thermistor Pod
- Skin Temperature Probe (2m)
- Respiratory Belt Transducer
- Light Meter and Probe
- Sphygmomanometer



PTK12 Electrodermal Activity Kit

Suitable for galvanic skin response and skin temperature recordings in human subjects. Capable of performing psychophysiology-related experiments but not limited to the Stroop effect, biofeedback, electrodermal response, and classical conditioning.

Recommended:

Lt or Lt LabStation: Human Physiology
PowerLab 26T

Kit contains:

- GSR Amp
- Finger Electrodes
- Thermistor Pod
- Skin Temperature Probe (2m)



PTK15 EOG Kit

Suitable for recording horizontal and vertical eye movement and position. Ideal for conducting experiments investigating slow-tracking, saccades and more.

Recommended:

Lt or Lt LabStation: Human Physiology
PowerLab 26T or 15T

Kit contains:

- EOG Pod
- Shielded Lead Wires
- Disposable ECG Electrodes (100)



PTK31 Skin Temperature Kit

Suitable for recording continuous skin temperature on human subjects for biological measurements of temperature in the range of 0°C to 50°C.

Recommended:

Lt: Medicine, Nursing
Lt or Lt LabStation: Human Physiology
PowerLab 26T or 15T

Kit contains:

- Thermistor Pod
- Skin Temperature Probe



How can Lt help?

Educators

Easy lesson authoring

Building media-rich lessons is simple. Drag-and-drop a range of content types to create interactive exercises, including multiple choice questions, short form written answers and image annotation.

Collaborative

Share content and workload with your fellow educators and teaching assistants. Set varying levels of access to allow others to review content, add content, or publish revisions online.

Flexible grading

Automatically grade quizzes while keeping the flexibility to add feedback and positive reinforcement, and manually grade written assessments.

Onboarding

Our Instructional Design team can convert and edit your existing content and lessons to make them even better in Lt.

Administration

Simple setup

Lt needs only an internet browser to allow course administration, authoring and publishing. Our data acquisition app, used for sampling, installs in 30 seconds.

Analytics

Our analytics allow you to view class progress in each lesson and across your course, and provide valuable insights about where and how students are interacting with course material.

Secure and scalable

Totally secure, Lt is hosted on Amazon Web Service's encrypted servers with guaranteed 99% uptime and the ability to maintain speed as more students login to Lt.

Students

Learn anywhere

Lt's cloud-based platform means students can learn on almost any device that connects to the internet. Whether they use iOS or android, tablet, mobile or laptop, lessons will be resized and optimized to look great.

PowerLab integration

In the lab, students can record and view their own physiological signals live on screen with PowerLab and sampling panels in Lt that can record Pulse, Spirometry, ECG, Blood Pressure and more.

Learn from real patients

For future health professionals, our patient cases allow students to follow a real patient from initial presentation to diagnosis and management. Expert healthcare professionals provide their views throughout the journey and students can practice note-taking and reflection.

Future proof

Lt is automatically updated with new features by our team of engineers, developers, and education specialists.

Getting started with Lt

Custom training and specialist support

Whether you need help with Lab installation and setup, IT training, Lt training or specialized support, we can get you up and running even faster with an add-on package of training and support services.



Try Lt now for free

Demo a selection of lessons and labs
adi.to/lr

Visit our website adstruments.com/education or contact your local ADInstruments representative for more information

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